separated by about 125 to 222 amino acid positions where in each position it may be any amino acid The amino acid polypeptide of claim 46 where the two sets of amino acids are separated by about 150 to 172 amino acids. The amino acid polypeptide of claim 47 where the two sets of amino acids are separated by about 172 amino acids. The amino acid polypeptide of claim 48 where the protease is described in SEQ. ID. NO. 4 The amino acid polypeptide of claim 46 where the two sets of amino acids are separated by about 150 to 196 amino acids. The amino acid polypeptide of claim 50 where the two sets of amino acids are separated by about 196 amino acids. The amino acid polypeptide of claim 51 where the two sets of amino acids are separated by the same amino acid sequences that separate the same set of special amino acids in SEQ. ID. NO. 6. The amino acid polypeptide of claim 46 where the two sets of amino acids are separated by about 150 to 190, amino acids. The amino acid polypeptide of claim 53 where the two sets of nucleotides are separated by about 190 amino acids. The amino acid polypeptide of claim 54 where the two sets of nucleotides are separated by the same amino acid sequences that separate the same set of special amino acids in SEQ. ID. NO. 2. Claims 45-55 where the first amino acid of the first special set of amino acids, that is, the first special amino acid, is operably linked to any peptide comprising from 1 to 10,000 amino acids. The amino acid polypeptide of claims 45-56 where the first special amino acid is operably linked to any pepude selected from the group consisting of: any any reporter proteins or proteins which facilitate purification. The amino acid polypeptide of claims 45-57 where the first special amino acid is operably linked to any peptide selected from the group consisting of: immunoglobin-heavy chain, maltose binding protein, glutathion S transfection, Green Fluorescent protein, and ubiquitin. Claims 45-58, where the last amino acid of the second set of special amino acids, that is, the last special amino acid, is operably linked to any peptide comprising any amino acids from 1 to 10,000 amino acids. Claims 45-59 where the last special amino acid is operably linked any peptide selected from the group consisting of any reporter proteins or proteins which facilitate purification. The amino acid polypepude of claims 45-60 where the first special amino acid is operably linked to any peptide selected from the group consisting of: immunoglobin-heavy chain, maltose binding protein, glutathion S transfection, Green Fluorescent protein, and ubiquitin.

Any isolated or purified peptide or protein comprising an amino acid polypeptide that codes for a protease capable of cleaving the beta secretase cleavage site of APP that contains two or more sets of special amino acids, where the special amino acids are

separated by about 100 to 300 amino acid positions, where each amino acid in each position can be any amino acid, where the first set of special amino acids consists of the amino acids DTG, where the first amino acid of the first special set of amino acids is, the first special amino acid, D, and where the second set of amino acids is either DSG or DTG, where the last amino acid of the second set of special amino acids is the last special amino acid, G, where the first special amino acid is operably linked to amino acids that code for any number of amino acids from zero to 81 amino acid positions where in each position it may be any amino acid. The amino acid polypeptide of claim 62, where the first special amino acid is operably linked to a peptide from about 64 to 77 amino acids positions where each amino acid position may be any amino acid. The amino acid polypeptide of claim 63, where the first special amino acid is operably linked to a peptide of 71 amino acids. The amino acid polypeptide of claim 64, where the first special amino acid is operably linked to 71 amino acids and the first of those 71 amino acids is the amino acid T. The amino acid polypeptide of claim 65, where the polypeptide comprises a sequence that is at least 95% identical to SEQ. ID. (Example 11). The amino acid polypeptide of claim 66, where the complete polypeptide comprises SEQ. ID. (Example 11). The amino acid polypeptide of claim 62, where the first special amino acid is operably linked to any number of from 40 to 54 amino acids (positions) where each amino acid position may be any amino acid. The amino acid polypeptide of claim 68, where the first special amino acid is operably linked to amino acids that code for a peptide of 47 amino acids. The amino acid polypeptide of claim 69, where the first special amino acid is operably linked to a 47 amino acid peptide where the first those 47 amino acids is the amino acid E. The amino acid polypeptide of claim 70, where the polypeptide comprises a sequence that is at least 95% identical to SEQ. ID. (Example 10). The amino acid polypeptide where the polypeptide comprises Example 10).

Any isolated or purified amino acid polypeptide that is a protease capable of cleaving the beta (β) secretase cleavage site of APP that contains two or more sets of special amino acids, where the special amino acids are separated by about 100 to 300 amino acid positions, where each amino acid in each position can be any amino acid, where the first set of special amino acids consists of the amino acids that code for DTG, where the first amino acid of the first special set of amino acids is, the first special amino acid, D, and where the second set of amino acids are either DSG or DTG, where the last amino acid of the second set of special amino acids is the last special amino acid, G, which is operably linked to any number of amino acids from 50 to 170 amino acids, which may be any amino

acids. The amino acid polypeptide of claim 73 where the last special amino acid is operably linked to a peptide of about 100 to 170 amino acids. The amino acid polypeptide of claim 74 where the last special amino acid is operably linked to to a peptide of about 142 to 163 amino acids. The amino acid polypeptide of claim 75 where the last special amino acid is operably linked to to a peptide of about about 142 amino acids. The amino acid polypeptide of claim 76 where the polypeptide comprises a sequence that is at least 95% identical to SEQ. ID. (Example 9 or 10). The amino acid polypeptide of claim 75 where the last special amino acid is operably linked to a peptide of about 163 amino acids The amino acid polypeptide of claim 79 where the polypeptide comprises a sequence that is at least 95% identical to SEQ. ID. (Example 9 or 10). The amino acid polypeptide of claim 79, where the complete polypeptide comprises SEQ. ID. (Example 9 or 10). The amino acid polypeptide of claim 74 where the last special amino acid is operably linked to to a peptide of about 170 amino acids. Claim 46-81 where the second set of special amino acids is comprised of the peptide with the amino acid sequence DSG. Claims 45-82 where the amino acid polypeptide is operably linked to a peptide purification tag. Claims 45-83 where the amino acid polypeptide is operably linked to a peptide purification tag which is six histidine. Claims 45-84 where the first set of special amino acids are on one polypeptide and the second set of special amino acids are on a second polypeptide, where both first and second polypeptide have at lease 50 amino acids, which may be any amino acids. Claims 45-84 where the first set of special amino acids are on one polypeptide and the second set of special amino acids are on a second polypeptide, where both first and second polypeptides have at lease 50 amino acids where both said polypeptides are in the same vessel. A vector which contains a polypeptide described in claims 45-86. A cell or cell line which contans a polynucleotide described in claims 45-87. The process of making any of the polynucleotides, vectors, or cells of claims 1-44. The process of making any of the polypeptides, vectors or cells of claims 45-88. Any of the polynucleotides, polypeptides, vectors, cells or cell lines described in claims 1-88 made from the processes described in claims 89 and 90.

Any isolated or purified peptide or protein comprising an amino acid polypeptide that codes for a protease capable of cleaving the beta secretase cleavage site of APP that contains two or more sets of special amino acids, where the special amino acids are separated by about 100 to 300 amino acid positions, where each amino acid in each position can be any amino acid, where the first set of special amino acids consists of the amino acids